AWIPS ROB 4.0 Brief Summary
National Deployment Date – 09/16/04

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New Functionality – The following processes / applications will experience a change in AWIPS ROB 4.0. A brief description of the new functionality follows on page 2.

+ Local Storm Reports
+ Radar Product Display
+ SCAN
+ FFMP
+ SAFESEAS
+ Text Workstation
+ Volume Browser / Grid Products
+ Data Monitor
+ Localization
+ WWA
+ Watch By County
+ Hydrobase
+ Site-Specific

+ HydroView / MPE
+ RiverPro
+ RFC
+ Crons
+ Freeware / COTS Software
+ System Processes
+ System Process Monitoring
+ System Purge
+ BUFR MOS Decoder
+ GRIB2 Decoder
+ Individual User Accounts
+ System Commands

Discrepancey Report Fixes – The following categories have DR fixes in AWIPS ROB 4.0. A description of each DR and its associated fix follows on page 13.

+ Climate
+ Color Curve/Blinking/Image Combinations
+ AWIPS Display
+ Local Storm Reports
+ Radar Product Display
+ Surface OBS
+ SCAN
+ SAFESEAS
+ Text Workstation
+ D2D Tools
+ Upper Air OBS
+ Volume Browser / Grid Products
+ WWA
+ Hydrobase

+ HydroMap / MPE
+ Site-Specific
+ HydroView
+ LDAD EMDS
+ Fax
+ System Failover / Reboot
+ System General
+ System Localization / Install
+ System Printing
+ System Product / Process / Monitoring
+ Radar System
+ System Log
+ Radar
+ Warngen

NEW FUNCTIONALITY DETAILS

Local Storm Reports

+ The LSR GUI will make use of city priorities when making automatic city references.

+ Handling of cities is improved so that more important locations appear in the list.

+ You can now provide times in UTC time on the Create/Edit page.

+ The resolution of the duplicate cities is improved. Also it was made clear how to use thearrow keys to navigate the city list and choose the correct duplicate city name.

+ The format of the practice header has been corrected.

+ The PIL pieces that the LSR GUI uses are now stored in a file, so it is possible to manually override them.

+ The magnitude determination method designator has been added to the magnitude section of the LSR event format. (For example, "E" for estimated). This will be enabled at a specific date and time, nationwide. At the writing of this release notes, the date is set for 12 UTC, Dec 7, 2004.

+ Several minor bugs related to proper latitude/longitude determination and proper spotter searching / matching have been fixed.

Radar Product Display

+ New radar products include Tornado Rapid Update (TRU) and Digital Mesocyclone Display (DMD) algorithm.

+ A new means of navigating all-tilts displays includes using the shift key with the up/down arrows on the keypad to move vertically within the volume. The left-right keys still move in time, and unshifted up/down changes loop speed.

SCAN

+ SCAN can now display the Digital Mesocyclone Display (DMD) product. The DMD Table has its own User's Guide, separate from the SCAN User's Guide.

+ Now that SCAN can display the DMDs, which use circular icons to represent circulations, the storm cell icons needed to be changed from circles to hexagons, which is a compromise between the circles previously used and the rectangles used by Warning and Decision Support Software (WDSS)

+ SCAN has been fully ported to Linux. This includes the display, the processor, and the Data Monitor.

FFMP

+ FFMP has been fully ported to Linux. This includes the display, the processor and the Data Monitor.

+ Additional sources of QPF can now be ingested by FFMP, in order to compare to FFG. Digital Hybrid Reflectivity (DHR) radar product is the primary precipitation source for the FFMP table and display, but several other sources are available, including SCAN 1-Hour QPF, and several other QPF and QPE options. Note that the selection of these additional precip sources will not affect FFMP's background precipitation monitoring. FFMP will continue to tabulate precipitation totals based on the DHR product. Also note that except for the SCAN 1-Hour QPF, the displays for these extra sources will not autoupdate, they must be re-selected to refresh.

SAFESEAS

+ Direction, height, and period for both primary and secondary swells have been added to the variables monitored and displayed by SAFESEAS.

+ The SAFESEAS trend is expanded to 24 hours.

Text Workstation

+ A change in the data ingest system allows very large text products (>131kbytes or approx1800 lines) to store without truncation.

+ The warning expiration reminder now applies only to SMW, SVR, TOR, FFW, and FLW products.

Volume Browser / Grid Products

+ Full Eta12 runs to 84 hours are now available. Vertical velocity at 850, 700, and 500 is added to the UKMET grids.

+ DGEX grids (Downscaled GFS and Eta Extension; 12km Eta to 192 hours) are now being ingested.

+ Volume Browser *Fields* now includes Parcel LI for the 12km Eta. The menu entry is under Sfc/2D -> Convective.

+ eta80 only goes out to 60 hrs from the 12Z run (no 18Z run).

+ eta20 only goes out to 48 hrs on the 18z run.

Data Monitor

+ In the AWIPS Netscape Data Monitor there is a page to restart or to administer LDAD and MSAS files. Since a new webserver (apache) is being used there is a new way to change the passwords to access these pages:

  To modify the passwords:

  for the ldadAdmin user (used to access the LDAD/MSAS Admin page)
  log onto px1f as user *root*:
  ssh ds "chmod 777 /data/fxa/data/htdocs/passwords"
  /usr/local/apache/bin/htpasswd /data/fxa/data/htdocs/passwords ldadAdmin

  for the awipsAdmin user (used to access the LDAD/MSAS restart page):
  log onto px1f as user *root*:
  ssh ds "chmod 777 /data/fxa/data/htdocs/passwords"
  /usr/local/apache/bin/htpasswd /data/fxa/data/htdocs/passwords awipsAdmin

Localization

+ There are 3 marine zones: Coastal marine zones, Offshore marine zones and High seas marine zones. Currently, only one marine zone can be displayed as a map background. Sites can choose one zone as the default marine zones by re-localization.

  Some OCONUS WFOs with marine responsibility need to display all three marine zones simultaneously so that forecasts can be prepared for all the marine zones. They need buttons for all three marine zones in D2D Maps menu.

  Sites can download shapefiles for 3 marine zones from NOAA1 and choose one marine zone as their default marine zone in localization. The shapefiles of the default marine zone should be named as: *marine_zones.dbf*, *marine_zones.shp.Z*, *marine_zones.shx*. In localization, the marine zone map file *marine_zones.bcd* will be created by script *makeMapFiles.csh*. The marine zone location plot info file *marine_nums.lpi* will be created by the script *makeStationFiles.csh* from *reg_marine.id*. The file *reg_marine.id* is created by script *makeWWAtables.csh* from the default marine zone shapefiles.

To display all 3 marine zones, below shapefiles (9 files) will be added to the *nationalData* directory:

```
coastal_zones.dbf
coastal_zones.shp.Z
coastal_zones.shx
offshore_zones.dbf
offshore_zones.shp.gz
offshore_zones.shx
high_seas_zones.dbf
high_seas_zones.shp.Z
high_seas_zones.shx
```

Since the default marine zone shapefiles (*marine_zones.dbf, marine_zones.shp.Z* and *coastal_zones.shx*) are used by WWA and SAFESEAS scripts to generate some tables, they will remain in the *nationalData* directory and sites should update them in the same way as before (copy data files from one zone they preferred). This will make sure WWA and SAFESEAS functions will not be affected.

Three localization scripts are modified to create the *.bcd* map files and *.lpi* location plot info files for the 3 marine zones:

```
makeMapFiles.csh:
marine_zones.dbf     marine_zones.bcd      (current)
coastal_zones.dbf    coastal_zones.bcd     (new)
offshore_zones.dbf   offshore_zones.bcd    (new)
high_seas_zones.dbf  high_seas_zones.bcd  (new)

makeWWAtables.csh:
marine_zones.dbf,    reg_marine_gsf.txt    reg_marine.id   (current)
coastal_zones.dbf,   reg_coastal_gsf.txt   reg_coastal.id   (new)
offshore_zones.dbf,  reg_offshore_gsf.txt  reg_offshore.id  (new)
high_seas_zones.dbf, reg_high_seas_gsf.txt reg_high_seas.id (new)

makeStationFiles.csh:
reg_marine.id     marine_nums.lpi      (current)
reg_coastal.id    coastal_nums.lpi     (new)
reg_offshore.id   offshore_nums.lpi    (new)
reg_high_seas.id  high_seas_nums.lpi  (new)
```

This design will keep all current marine zone data files so that AWIPS D2D will works just as before. The only change is that new marine zone buttons are added and all 3 marine zones can be displayed in D2D.

Watch Warning Advisory

+ In OB4, WWA is now "self-contained;" that is, the finished product is created within WWA, without final editing in a text workstation window.

Watch By County

+ WWA county map and Watch by County Notification (WCN) geography lists will include the marine zones

+ Increased ingest executable logging

+ Correct segment ordering - Cancel, Replace (Cancel/New), New, Extension/Expansion and Continue

+ WCN template change for marine and independent cities. Separate WCN NWR template creation.

+ There are two major switchovers, the turn-on of VTEC and the change from unsegmented followup statements to segmented followup statements

+ As with AWIPS OB3.1, the templates were changed yet again. This was to supportthe switch from unsegmented statements to segmented statements and a new optional default stationary storm motion for flash flood products. In AWIPS OB3.3 and merged into AWIPS OB4, the user will be able to issue an expiration up to 10 minutes after the product expires, and the purge time of expirations and cancellations will be pushed back 10 minutes from the issue time to accommodate weather radio distribution. Additionally, a simple mechanism has been introduced that allows individual products to be configured such that they can be generated for areas beyond the CWA boundary.

+ A new version of *VTECparsingInfo.txt* was distributed with AWIPS OB3.3 and merged into AWIPS OB4. The first line in the file will contain the string '0050208_0000'. This is the date of the operational VTEC turnon. The only casewhere a user should modify this file is if the scheduled date of the operational VTEC turnon changes. The purpose of this date is to tell the VTEC encoding software to reset ETNs to one immediately after that date even if some experimental VTEC products of the same type were issued earlier in the year. The rest of the contents of this file are being used to augment the internal parsing defaults and should not be changed. This file will *not* need to be changed at the time of the transition.

HydroBase

+ Primary and Secondary Backup HSA Backup fields have been added to the RiverPro Forecast Groups/Points window.

Site-Specific

+ Site-Specific now runs the Sacramento model in addition to the Kansas City model.

+ RFCs may now send data for the Sacramento model to their WFOs through a WANdata transfer process. If RFCs set up the process, their WFOs will ingest the data.

+ The Site-Specific GUI has been modified. The GUI now has functionality needed to run the Sacramento model.

+ If your site has local entries in the virtual field table (*/data/fxa/customFiles/virtualFieldTable.txt*) for different temperature at the surface and higher levels when using ETA40 from the volume browser you will need tomodify your entries as follows:

```
Sfc-950 |  |N|Sfc-950 mb Lapse Rate >=4  |C|CONTOUR,IMAGE,OTHER|  |\
*Difference,Layer|T,Surface|T,950MB
Sfc-900 |  |N|Sfc-900 mb Lapse Rate >=9|C|CONTOUR,IMAGE,OTHER| | \
*Difference,Layer|T,Surface|T,900MB
Sfc-850 |  |N|Sfc-850 mb Lapse Rate >=13|C|CONTOUR,IMAGE,OTHER|  |\
*Difference,Layer|T,Surface|T,850MB
Sfc-750 |  |N|Sfc-750 mb Lapse Rate >=22|C|CONTOUR,IMAGE,OTHER|  |\
*Difference,Layer|T,Surface|T,750MB
```

to this:

```
Sfc-950 |  |N|Sfc-950 mb Lapse Rate >=4  |C|CONTOUR,IMAGE,OTHER|  |\
*Difference,Layer,mesoEta212|T,2FHAG|T,950MB| \
*Difference,Layer|T,Surface|T,950MB
Sfc-900 |  |N|Sfc-900 mb Lapse Rate >=9|C|CONTOUR,IMAGE,OTHER| | \
*Difference,Layer,mesoEta212|T,2FHAG|T,900MB| \
*Difference,Layer|T,Surface|T,900MB
Sfc-850 |  |N|Sfc-850 mb Lapse Rate >=13|C|CONTOUR,IMAGE,OTHER|  |\
*Difference,Layer,mesoEta212|T,2FHAG|T,850MB| \
*Difference,Layer|T,Surface|T,850MB
Sfc-750 |  |N|Sfc-750 mb Lapse Rate >=22|C|CONTOUR,IMAGE,OTHER|  |\
*Difference,Layer,mesoEta212|T,2FHAG|T,750MB| \
*Difference,Layer|T,Surface|T,750MB
```

Prior to this workaround the product mixed ETA40 and ETA20 resulting in bad products. The full fix will be in AWIPS OB5.

+ The */tmp/orbit* files in the *temp* directory on the workstation will not let user's log in. In such a case, delete */tmp/orbit** files on workstation. To help prevent problem, log out from center monitor (0:0) and close all applications before completely logging out.

HydroView / MPE

+ HydroMap/MPE now supports two new MPE fields, Local Bias Satellite Precip and Local Bias Multisensor Mosaic.

RiverPro

+ RiverPro has been modified to support VTEC Service Backup. Information about issued products is sent between the site with the primary responsibility for a station and its two backup sites. If the primary site is backed up, information about the products sent during the backup time by a backup site can be restored to the primary site.

+ RiverPro supports the Operational, Experimental, and Test VTEC modes. RiverPro VTEC Event Tracking Numbers (ETNs) are drawn from the same pool for each of these modes.

+ RiverPro product issuance and backup info receipt logs are written to log files separately and named for each day.

RFC

+ The RFC Archiver has a new flat file viewer and some administrative functions have been added.

+ The RFC Verification program is now hosted on the RFC archiver.

+ The Ensemble Streamflow Prediction Verification System now incorporates the CPC Long Lead Outlook products.

+ The two RFC archive SHEF decoders (raw and processed) will use the same parser as the IHFS SHEF decoder.

+ The format of the log files (daily and product) has been changed to the log files of the IHFS SHEF decoder.

+ The incoming directory for the *shef_decode_raw* will remain on the DS and be mounted to the RAX, while the *shef_decode_processed* incoming directory will remain on the RAX with no mount back to the DS.

Crons

+ The *purge_mpe_files* cron runs twice a day on DS.

+ The *run_db_purge* cron runs twice per day on DS.

+ The *nwrWatchDog.sh* cron, which watches that *nwrTrans.pl* has not died and restarts if it has died, has been added to DS.

+ The *hwrnwr* and *hwrnwws* crons have been moved to PX2.

+ The *sendOTR.sh 136* cron has been replaced with *waitUpTo.pl 600* scron on DS.

+ The following crons have been moved to the PX: *WFOA_MSAS_Sfcnmc.run*, *WFOA_MSAS_Surface.run*, *WFOA_MSAS_Asos.run, WFO_MSAS_QCstage1_2.run, WFO_MSAS_QCstage1_2_late.run*, and *WFO_MSAS_QCday.run*.

+ The *MOSdriver NGM, LAMPHOURLIES, createTDL, LAMPMOS_00*, and *LAMPMOS_12* crons have been removed from AS2.

Freeware / COTS Software

+ blt 2.4z (HP and Linux)

+ openssl 0.9.7d (Linux and HP buildtime)

+ PostgreSQL 7.4.2 (Linux and HP runtime)

+ Tcl/Tk 8.4.4 (Linux and HP runtime)

+ Python Mega Widgets 1.2 (Linux and HP runtime)

+ Python Numeric 23.1 (Linux and HP runtime)

+ Python-tk 2.3.2 (Linux and HP runtime)

+ Scientific Python 2.4.3 (Linux and HP runtime)

+ netCDF 3.5.1 (beta 13) (Linux and HP runtime)

+ postgres 7.4 (Linux and HP runtime)

+ java 1.4.1 (Linux runtime)

+ SWIG 1.3.19

+ apache 1.3.29 (Linux runtime)

+ python-biggles 1.6.3 (Linux runtime)

+ PMW (Linux and HP runtime)

+ Plotutils 2.4.1 (Linux runtime)

+ Snack 2.1.1 (Linux runtime)

+ Jasper 1.700.51 (Linux runtime)

System Processes

As a part of HP-UX AS decommissioning many processes previously on AS1 and AS2 have been moved to PX1 or PX2 in AWIPS OB4.

+ *CollDBDecoder, StdDBDecoder, WarnDBDecoder, DataController TextDBController.config* and *DataController WarnDBController.config* have been moved from AS2 to PX2.

+ *RadarTextDecoder* has been moved from AS2 to DS1.

+ *AircraftDecoder* and *DataController BufrMOScontr.config* have been moved from AS1 to PX2.

+ *DataController SCANcontroller.config, DataController FFMPcontroller.config, SSController.config, MaritimeDecoder, FFMPprocessor, profilerDecoder, SCANprocessor, SSprocessor* (SAFESEAS), and *SFSfacServer* have been moved from AS1 to PX1.

+ *RaobBufrDecoder* and *textNotificationServer* have been moved from AS1 to PX2.

+ *hwrnwr, hwrnwws* and *hwrxnit* have been moved from DS1 to PX2.

+ *DataController TextCont3.config* was moved from PX2 to PX1.

+ *appsLauncher* runs on all LXs and *RadarNotify* runs on LX1.

+ *DataController TextCont_px2.config* runs on PX2.

+ *DataController TextCont_px1.config* and *DataController TextDBCont_px1.config* runs on PX1.

+ *DataController TextDBCont_ds1* runs on DS1.

+ The minimum number of *acqserver* processes on PX1 is 3 and is typically 8.

+ The number of *BufrDriver* processes on PX2 is 5.

System Process Monitoring

+ The CPU monitor, available from the Ingest Processes section of the Netscape SystemMonitor, now includes the Linux workstations.

+ Since AS2 no longer runs any persistent AWIPS processes, the AS2 column in the process monitor has been removed.

System Purge

+ On the PXs, the *master.purge.px* cron executes the *fxa-data.purge.px* script, in addition to an optional site-supplied *~fxa/bin/fxa-data-addons.purge.px* script. It runs twice an hour on PX1 and PX2 and writes logs to the */data/logs/fxa/master.purge.log.px* file.

+ To add cron jobs to the REP, update the *REPcron1* and *REPcron2* crontab files in */etc/ha.d/cron.d.* These crontab files are system crontab files and can run cron jobs for multiple users, so the user name must be included as the sixth field in the table. Note, the updated crontab files must be installed in the */etc/ha.d/cron.d/* directory on all nodes. This change will take place when restarted or when the resource group is swapped.

BUFR MOS Decoder

+ The *AVNDecoder, MRFDecoder, MosDecoder and HPCDecoder* have been replaced by a single decoder, *DecoderMOS*, and moved from AS1 to PX2.

+ The *startingest* scripts *startIngest.px2* and *stopIngest.px2,* and the configuration file *BufrMOScontr.config,* have been updated.

+ The following four configuration files were eliminated from */awips/fxa/data: MRFBufrDescTable.txt, MRFBufrDescTable.txt, AVNBufrDescTable.txt* and *HPCBufrDescTable.txt.*

+ The following four pattern files have been combined into *MOSBufrPattern.txt: MRFBufrPattern.txt, AVNBufrPattern.txt, HPCBufrPattern.txt* and *MOSBufrPattern.txt*.

+ Some of the advantages of this new decoder include:
    o Fewer executables and source code to maintain
    o Easy to deliver new types of MOS
    o Easy to accommodate any changes made to the existing MOS

GRIB2 Decoder

+ The *GRIB2Decoder* has been installed on PX1. It functions the same way as the *GRIBDecoder* except that it processes the GRIB2 raw data

files from the table and translates the unpacked values from the data. DGEX and Eta12 data are processed through the *GRIB2Decoder*.

Individual User Accounts

+ The existing login accounts *awipsusr* and *textdemo* have been removed, and each user of AWIPS software must have his/her own individual user account.

+ Home Directories will be on shared NFS partitions (*/home*) so that the users have the same home directory on all platforms.

System Commands

+ The *telnet, ftp* and *rlogin* commands have been replaced with *ssh, sftp* and *slogin* commands, respectively, except where performance was an issue within the AWIPS code.

DISCREPENCY REPORT FIXES AND DETAILS

Climate

+ When record snowfall is a trace, the output product has been corrected now to show T instead of -1. Previously, the user had to edit the product manually as necessary before transmission **(DR 13399)**

+ When the greatest snow depth is T, the corresponding date is now stored in the database. Previously, when the greatest snow depth for a given month was a trace, *display_climate* wrote the daily value to the daily database, but not the corresponding date to the monthly database. The user had to modify the monthly database manually to insert the date, or edit the final product manually as necessary before transmission. **(DR 13401)**

+ *display_climate* shows T for AVG and MAX snowdepth fields. **(DR 13403)**

Color Curve / Blinking / Image Combinations

+ User-created color curve works as designed when combining images and therefore this DR has been cancelled. Previously, when a user created a new color curve (one that shaded the freezing line on surface temperature for example), and then combined with another image, the newly created curve became distorted (i.e., the shaded region that before the combination highlighted the freezing line now shaded a different and larger range of temperatures on the part of the combined image). This was due to the 4-bit + 4-bit image combination algorithm. **(DR 1298)**

AWIPS Display

+ The window focus does not always follow the cursor. On the 3-headed Linux workstations, when moving the mouse from screen to screen, the window focus sometimes does not follow the cursor. That is, the window underneath the cursor is not always automatically activated after the mouse has moved from one screen to another. **Workaround**: Always maintain a "slice" of a root window between adjacent screens. That way the mouse will know which screen it is on before it moves over a window application in that screen. Alternatively, click mouse button one on a window header to make it active. **(DR 13708)**

Local Storm Reports

+ Manual PIL configuration capability is added. The field had expressed an interest in being able to manually provide the XXX, CCC, and wmoVar parts of the LSR PIL. The LSR GUI continues to get the PIL pieces as it does, but then it writes them to a file (and reads the file on subsequent runs) that can be manually edited if the WFO encounters a problem. **(DR 13615)**

+ Very close spotter locations may cause the LSR GUI to crash. This problem does not occur on the Linux workstation, it was an HP-related issue. **(DR 11893)**

Radar Product Displays

+ A misleading error message can be produced by the One-Time Request application. Simply display the first dialog if the selected product is not valid and the second error dialog box will not appear after clicking "OK." Previously, if the user tried to request the 256-level, 1-km res V product from the OTR (an invalid product), two dialog boxes appeared. The first reported that the 256-level V product must use res 0.25. When that error was dismissed, the second dialog box appeared, erroneously reporting that an error occurred while trying to send the OTR, when it was actually just reacting to the same invalid product specification noted in the first error dialog box. Even if the message were corrected to report an invalid product spec, since the user had been presented with an error dialog already, this second one should have been suppressed. **(DR 13495)**

+ Data dropouts (missing images) do not occur in auto-updating radar loops with 4- and 8-bit reflectivity data anymore. Previously, in a 12 frame loop, it had been observed that, on average, two to three random images in the loop would be missing after about 30 minutes of letting new data auto-update. When the loop was reloaded after clearing the pane, then all data were present. The longer the loop runs, the more frames would become missing. This had been observed with 4- and 8-bit reflectivity in standalone or in combination with velocity. **(DR 13787)**

Surface Observations

+ METAR reports that do not have a lat/lon because the station ID is not in the station table do not get stored anymore. Previously, all METAR observations that went through the *MetarDecoder* process got stored in the netCDF files, even those for which we had no metadata (these were tagged in the log as "not in dictionary"). When such a station was stored, its latitude and longitude were set to -1, and the display plotted them at that location. Few sites saw it since most did not have a scale

on which this location appeared, but for those that did, it could be misleading. **(DR 13084)**

+ The Snow Water Equivalent image is now displayed properly on D2D. Previously, the entire image was shifted about 1 degree to the east. **(DR 13676)**

SCAN

+ The SCAN New Event Warning/Indication box works as designed, therefore this DR was withdrawn by its originator. **(DR 12627)**

SAFESEAS

+ When modifying values in the in SAFESEAS Configure Display Thresholds and Configure Monitor Thresholds windows monitor, the user can highlight a selected zone. Previously, the user could highlight the parameter values for other zones which could lead to confusion. **(DR 13335)**

+ Running SAFESEAS with debug turned on may cause the application to crash. Leave debug turned off for SAFESEAS unless it is necessary to have it on for troubleshooting. **(DR 12954)**

Text Workstation

+ The text window does not look for *siteCommission.txt* file before transmitting every product anymore, thus eliminating unnecessary overhead. **(DR 11807)**

+ Highlighted text is readable in the Linux text workstation text windows. Previously, when text was highlighted in a text window on the Linux text workstation, the background was a whitish-yellow color and the text was white, making the text virtually unreadable. **(DR 12694)**

+ The textdemo "start" script does not source *readenv.csh*. Previously, the textdemo "start" script did source *~fxa/readenv.csh*. This was unnecessary since *readenv.csh* was already sourced via textdemo's *.cshrc* upon login. More important, this multiple sourcing of *readenv.csh* and *environs.csh* led to globing problems ("Word too long" errors due to extra-large variable replacements). When it happened, the "start" script failed when it tried to source *readenv.csh*, resulting in the *textWS.tcl* and *hmMonitor.tcl* scripts not executing. **(DR 13605)**

+ The *hmMonitor* closes when the Text Workstation closes**.** Previously, when the user exited the Text Workstation, the *hmMonitor* did not close and stayed up. So, when the user selected **Start TextWS** again,

the Text Workstation started, but it also started a second *hmMonitor* process. As a result, multiple *hmMonitor* processes were running on the X-Term. This started occurring when the X-Terms were connected to the Linux Workstations. **(DR 13886)**

D2D Tools

+ Time setting problems that were evident with the D2D time-setting mechanism have been eliminated. **(DR 12344)**

  When a user selects **Set time** on D2D, specifies a time in the past, deselects **Freeze time at this position**, and selects **OK**, the clock sets back as it should. Previously the display did not pay attention to the time on the clock, instead loading current data. (The behavior was correct if **Freeze time at this position** was left in its default selected state.)

  Previously, if a user set the time back, then brought up the **Set time** dialog to adjust the time, the current real time was displayed in the dialog. Now the **Set time** radio button should be selected and the previously set displaced time should be displayed.

  If **Freeze time** is selected, the format of the clock on the display changes from *hh:mm Z dd-mmm-yy* to *dd-mm-yy hh:mm Z*. The same format should be used in all cases, letting the white on black or yellow on black color be the cue that the time displayed is not the current time.

Upper Air Observations

+ The KMXR sounding is displayed above 300 MB. **(DR 11367)**

+ Displaying the interactive Skew-T for winds-only output (e.g., VWP winds, profiler) works. **(DR 12941)**

Volume Browser / Grid Products

+ The Sea Ice Cover product has no units **(DR 13531)**. New DR has been written to remove the product from the Volume Browser. **(DR 14867)**

Watch Warning Advisory

+ WWA does not crash if launched after GFE on a workstation. Previously, if WWA was launched on a workstation that already had GFE running, WWA failed to start up and crashed. However, if WWA

was started first, and then GFE was started, both applications did run concurrently. WWA could even be exited and restarted successfully with GFE still running, as long as WWA was the first of the two applications to be launched. **(DR 10471)**

+ The WOU products represented in the new WOU GUI are automatically ordered. **(DR 13663)**

+ The WCN new template file names defined in the WWA char database match the actual names of the NWR template files. Also, the WCN template files changed from zone based to county based in the template itself. **(DR 13664)**

+ Spell check enhancements were applied and the search function is working correctly. **(DR 13665)**

+ The WWAAdmin Hazard panel does indicate changes made before a save. **(DR 13666)**

+ Monitor refresh does not slow down when many products are in use now. Previously, whenever many products appeared in the Monitor, and many rows of data were in the status table, WWA experienced an extreme slowdown of the Monitor refresh. Local testing with 150 rows of data in the status table caused 30 seconds to pass during refresh, while during an actual event LWX, BOX, and GYX experienced 1 - 4 minute lapses while the Monitor was refreshing given similar amounts of data. **(DR 13667)**

+ Products can be issued out to seven days. The new NWS Directives allow for outlook-type products, such as Frost/Freeze Outlook, to be issued out to seven days in advance of the actual event. Previously, in the WWA Composer, the maximum duration was 99 hours, or approximately 4 days. **(DR 13747)**

+ The *ProdExp* time is updating in the Composer correctly. Previously, the *ProdExp* field was not updating when you followed up or cleared a hazard and the Composer came up. It remained the issuance time plus the offset time, rather than the current time plus the offset time. **(DR 13748)**

Hydrobase

+ The two problems with the check feature in HydroBase's SHEF decoder restart window have been corrected. The information shown in the window is from the current time Check was run. The time shown for the start of *shefdecode* is in GMT. **(DR 13624)**

HydroMap/Multisensor Precipitation Estimate (MPE)

+ HMAP/MPE does not crash when time lapse is started. Previously, the crash most often occurred when a time lapse was started, then ended, and a new time lapse was started for more hours than the original time lapse, or when a time lapse for a large number of hours (e.g., 24) was started. **(DR 12843)**

SiteSpecific

+ On Linux, SiteSpecific does start from HydroMap when HydroMap is started from D2D. Previously, if the user selected HydroView from the Hydro Apps submenu in the NCEP/Hydro menu of D2D, and then started SiteSpecific from the LiveData menu of HydroMap, SiteSpecific did not start. **(DR 10665)**

+ SiteSpecific does start from the D2D NCEP/Hydro menu on Linux. Previously, if the user selected HydroView from the Hydro Apps submenu in the NCEP/Hydro menu of D2D, and then started SiteSpecific from the LiveData menu of HydroMap, SiteSpecific did not start. **(DR 11401)**

HydroView

+ PDC GUI does not display correctly upon launch **(DR 13900)** . The PDC GUI has been removed from the NCEP/Hydro Menu **(DR 14044)**.

LDAD EMDS

+ *hmIngest* successfully processes the XXXRRSXXX text product. The RRS product is received and ready for display in Web Dissemination. **(DR 13474)**

Fax

+ The *sendFax.tcl* script has been removed from */awips/fxa/ldad/bin*. The *sendFax.tcl* script now lives in */awips/fxa/bin*. **(DR 13672)**

System Failoveer / Reboot

+ The *ingProcMon* process stops on AS1 when failing the AS2 swap (*as2swap*) package back to AS2. Previously, the *ingProcMon* process for AS2 sometimes continued to run on AS1 following the failback of *as2swap* to AS2, in addition to starting up again on AS2. The process summary for AS2 in the Text row of the Netscape Monitor would report it being down. **(DR 12639)**

+ When DS1 crashes, the dedicated *ORPGCommsMgr* TCP/IP connection does not fail on DS2. Previously, when DS1 crashed, the *dsswap* package moved over to DS2 but the dedicated *ORPGCommsMgr* TCP/IP connection then failed on DS2. This was because when DS1 recovered, the *fxa* cron was resident there and tried to start up the *ORPGCommsMgr* process prior to the *dsswap* restart on DS2. This sequence of events resulted in the ORPG (radar side) opening up the link with the DS1 process instead of the DS2 process. **(DR 13582)**

+ SUA products do store locally to the *textdb* while on DS2. Previously, the SUA products did not store locally to the database while the *dsswap* package was running on DS2. An error message appeared in the *preprocessSUA.log* file stating: "Failed to store product to text database." When executing the *textdb -w* command from the command line, the following error appeared: "Incoming product is a duplicate in the database. Product will not be stored." This is despite the fact that the product was not a duplicate. **(DR 13629)**

+ APS products get stored to the *textdb* after a DS failover. Previously, when a text file was sent from the bubble application into AWIPS after a DS failover, a failure occurred storing the product to the text database. The following error appeared in the APS log: TextDBConnection.C PROBLEM: Failure writing to textdb **(DR 13640)**

+ Configure Autofax does not fail to send faxes while failed over on DS2. **(DR 12567)**

System General

+ Previously, the home directories were writeable by group and world which caused problems with GDM and xauthority files. Linux expected the */awips/fxa/awipsusr* and */awips/fxa/textdemo* directories to be unwriteable by group and world (755). But since they were 775, the Gnome Display Manager (GDM) created *xauth* files in */tmp* instead of using the files in the home directory. This caused some applications to fail to launch due to lack of authority. Then the user had to change the permissions on the */awips/fxa/awipsusr* and */awips/fxa/textdemo* directories to 755 if they were not already set to that. This is OBE for OB4 since *awipsusr* and *textdemo* are no longer general login accounts. This issue does not impact individual accounts since the permission on the individual home directories is 750. **(DR 13201)**

+ The Perl Tcl/Tk extensions are now included in the Perl package delivered with AWIPS. **(DR 13786)**

+ User should only log out of the workstation from the middle display (0.0). **(DR 14614**)

+ The red banner event messages get raised to the top when a new message is generated. Previously, the Urgent message window (red banner) popped up to alert the D2D user to certain problems or events, such as a server swap was in progress, or a radar connection had gone down. If the user iconified the window, a subsequent message would cause it to deiconify and appear in front so that the user could see it. However, if the user pushed the window behind other windows (e.g., by clicking on the title bar of D2D), new messages would not cause the window to come back to the front, possibly resulting in the user missing important information. **(DR 11372)**

System Localization / Install

+ No *chmod* errors are displayed now during the ADAPPT install. **(DR 13521)**

System Printing

+ The SEL products do print from a Linux textworkstation. Previously, this problem was due to special characters embedded near the start of the document. This caused *a2ps* to think that the document was binary, thus it did not get printed from a text window. The solution involved adding the option "--print-anyway=yes" to the Linux *print* command in *textPrint.tcl* script. **(DR 13553)**

System Product / Process / Monitoring

+ The native Linux Browser (Mozilla or Konqueror) is set up for AWIPS Netscape Bookmarks. **(DR 13361)**

+ The main ingest restart log breaks if it becomes greater than 100K. **(DR 13512)**

+ SAFESEAS is included now in ingest restart. **(DR 13515)**

Radar System

+ All One-Time Request messages are now displayed in the Radar Status Window. Previously, not all of the messages typically received when performing a one-time request were displayed in the Radar Status window. For example, when making a request, the GSM messages were displayed, but the messages that the requested product has been stored and that the line has been disconnected were not, even though these events did occur. These messages were not

displayed until another request is sent. The user had to check the radar logs to verify product receipt, or select the product from the D2D menu to see if it had been stored. **(DR 13143)**

System Log

+ The master purge log no longer reports the following errors when purging some directories:**- unlink 12hr FAILED: Not owner.** The offending message occurred when *purge_subs* hit a directory of directories with more than number-to-keep entries. At the cost of trivial amount of processing, we now check to see if the item in question is a directory, and do not attempt to remove it if it is. **(DR 11412)**

+ The *notificationServer* does not crash on a non-existent product version. Previously, the *notificationServer* crashed while attempting to request a version of a product that did not exist. **(DR 13475)**

+ The *asyncScheduler* process log reflects a PID number that is the same as the active process. **(DR 13738)**

+ The *AircraftDecoder* process does not crash. Infrequently, the *AircraftDecoder* had crashed with a Signal 11 segmentation violation. When this would happen, the AS1 CPU idle time would go to 0%, with the *AircraftDecoder* process running at the top of the list. **(DR 10910)**

Radar

+ Previously, three 4-panel radar products could not be displayed from the *kxxx* four panel pull down: Comp 0.5 VIL mx, VIL Comp Max2 Max 3, and Tot 1hr 3hr 0.5. The IGC_Process log will report 'Unable to read key: <depict key> from the MultiLoad table.' **(DR 13989)**

+ All Tilts Z/SRM8 loads correctly. Previously, when loading the All Tilts Z/SRM8 product occasionally the 4-bit 0.5 Reflectivity loads then an error message would have appearred saying the 8-bit data were unavailable. After a pause of up to one minute, the data would then load. This was seen for each elevation angle. It has also been seen where the error message appearred but the 8-bit data was loaded as soon as it was available from the ORPG. The 4-bit data did not display at all. **(DR 13990)**

Warngen

+ WarnGen correctly interprets template variables in logical operators that control bullets. **(DR 13979)**